HD-SDI to DVI Scaler Single-Link

EXT-HDSDI-2-DVISSL
USER MANUAL

www.gefen.com

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Notice

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Rev X2

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The HDSDI to DVI Single Link Scaler is the newest revision of our HDSDI conversion line incorporating SD/HDSDI Single link mode conversion scaled to Single link DVI-D. Resolutions of up to 1080p are supported over the DVI link for those that want true “High Definition”. Performance has been greatly enhanced due to Gennum’s VXP Scaler onboard; allowing for new features such as: Color & Gamma Correction, Noise Reduction, Detail Enhancement, Aspect Ratio Selection, Pattern Generator Mode, & Multiple Language Menu Support. Bottom Line? -- More performance, less cost.

FEATURES

- 10-bit resolution for greater precision and dynamic range
- Proprietary 10-bit motion adaptive video de-interlacing with edge interpolation for HD / SD formats.
- Advanced noise reduction and detail enhancement
- Max. active image size of 2048 samples x 2048 lines PBP processing for various combinations of video and graphics with alpha blending
- Fully integrated sprite based multi-plane OSD controller.
- Frame rate conversion to / from any refresh rate
- Pattern mode w/ color bars & cross hatch patterns
- Color correction
- Noise Reduction
- Detail Enhancement
- Brightness Adjustment
- Gamma Selection
- Aspect Ratio Select
- Custom Timing output mode
- French/English Menu Set
- RS-232 upgradeable firmware
- RS-232 and/or IR Control
- Lifetime support includes one-year manufacturer’s warranty and free technical support for the lifetime of the product.
- Rack Mountable

CONTENTS OF THE PACKAGE

The HD-SDI to DVI Scaler consists of:

(1) HD-SDI to DVI Scaler
(1) RMT-8HDS-IR Remote Control
(1) 5V DC Power Supply
(1) User's Manual

OPERATION NOTES

On power up, the HD-SDI to DVI Scaler will automatically detect the input format of the input. The unit is controlled using the included 8 button remote.

Pressing the OUTPUT button cycles the HD-SDI to DVI Scaler through the following output modes: 640x480 - 800x600 - 720p - 1080i

Other functions and output modes can be accessed through the onscreen menu.
(To Restore I/O settings, simply recycle power on the Scaler)

To bring up the on-screen menu, press the MENU button. Navigation is done using the UP, DOWN, LEFT, RIGHT and ENTER buttons.

The SOURCE button selects the input source (Input 1 or Input 2)

*Note: Both dip switches under the remote battery cover must initially be in the OFF position to communicate with the Scaler. For more information, please see page 7 for RMT-8HDS-IR Installation instructions.

Infrared Eye

Power Indicator Light

Audio Output

RS-232 Uplink Port

5V Power Connector

HD-SDI Input 1

HD-SDI Loop Out 1

DVI-D Output

MENU FUNCTIONS

Aspect:

- -Full Screen: Stretches input to fill the Monitor.
- -Letter / Pillar Box: Sets the aspect ratio to fit a letter or pillar box format.
- Panoramic Zoom feature
- -Extract: Feature to magnify the signal.
  - -Size: Adjusts signal magnification.
  - -Horizontal / Vertical Position: Moves the magnified signal Horizontally and Vertically
- -Through: Feature to crop the signal.
  - -Horizontal / Vertical Size: Horizontally and Vertically contracts or expands the cropping viewport.
  - -Horizontal / Vertical Position: Move the signal Horizontally or Vertically inside the cropping viewport.

Layout:

- -Size and Position:
  - -Horizontal / Vertical Size: Adjust Horizontal or Vertical resolution.
  - -Horizontal / Vertical Position: Move image Horizontally or Vertically.
- -Image Border: Select color for the image border

Picture:

- -Image Color:
  - -Contrast: Individually adjust the contrast for red, green and blue
  - -Brightness: Individually adjust the brightness for red, green and blue
  - -Black level: Adjust black levels between 0 (default) and 100
- -Detail Enhancement:
  - -Detail Enhancement: Digitally enhance signal
  - -Noise Threshold: Adjusts noise allowed in detail enhancement
- -Noise Reduction: Digitally reduce signal noise
- -Motion Threshold

Input:

- -Input Video Format: Auto Detect by default. Signal can be forced to a specific High-definition resolution. (Please see Supported Input/Output Resolutions for more information).
- -Link Configuration: When using dual link SDI/HDSDI input, allows you to select either YCbPr or RGB color spaces.
- -Clean Aperture:
  - -Horizontal and Vertical Size: Stretch image Horizontally or Vertically
  - -Horizontal and Vertical Position: Move image in view port Horizontally or Vertically

Input Menu Continued...

-Audio: Selects which audio pair to use for audio output (1 - 8); Default is Channel 1.
-Remote Channel: Changes the IR code of the HD-SDI to DVI Scaler to one of 4 different settings between 0 and 3. When the remote channel is changed, dip switches in the 16 button remote must be changed to the corresponding code in order to continue operating the HD-SDI to DVI Scaler. (Please see RMT-8HDS-IR Installation page for more information.)

Output:

-Video Output Format: Select the desired HD output resolution. (Please see Supported Input/Output Resolutions for more information).
-Graphic Output Format: Select the desired computer output resolution. (Please see Supported Input/Output Resolutions for more information).
-Custom Output Format:
  -Total Pixels: Total Horizontal and Vertical pixels for the DVI monitor
  -Total Active Pixels: Total Horizontal and Vertical pixels actually to display the picture.
  -HSync and VSync Backporch
  -HSync and VSync Width
  -Refresh Rate: Change custom Refresh Rate (48, 50, 59.94, 60, 75, 85Hz)
-Sync Adjust: Horizontal and Vertical Sync Adjust (0-3 with Default: 0)
-Auto Genlock: Locks input clock in sync with output clock. (Note: feature only works if input and output frequencies are multiples of each other)
-Language: Set menu to display English or French text.
-Gamma Correction:
  -Default: Set for Default Gamma settings.
  -sRGB
  -Custom: Enables Gamma Coefficient menu item as the current Gamma coefficient.
  -Gamma Coefficient: (0.3 - 3.0); Default set at 1.0.

Patterns:

-Color Bars: Display color bar video pattern.
-Cross Hatch: Display cross hatch video pattern.

SUPPORTED INPUT/OUTPUT RESOLUTIONS

Input Video Formats Supported:

480i	720p/50	1080p/23.98	1080sf/30
480p	720p/59.94	1080p/24	2K-p/23.98
576i	720p/60	1080p/25	2K-p/24
576p	1035i/59.94	1080p/29.97	2K-sf/23.98
720p/23.98	1035i/60	1080p/30	2K-sf/24
720p/24	1080i/50	1080sf/23.98	
720p/25	1080i/50M	1080sf/24	
720p/29.97	1080i/59.94	1080sf/25	
720p/30	1080i/60	1080sf29.97	

Output Video Formats Supported:

480i	720p/50	1080p/23.98	2K-p/23.98
480p	720p/59.94	1080p/24	2K-p/24
576i	720p/60	1080p/25	
576p	1035i/59.94	1080p/29.97	
720p/23.98	1035i/60	1080p/30	
720p/24	1080i/50	1080p/50	
720p/25	1080i/50M	1080p/50M	
720p/29.97	1080i/59.94	1080p/59.94	
720p/30	1080i/60	1080p/60	

Output Graphic Formats Supported:

640x350/85	1024x768/75	1280x1024/85	1920x1200/60
640x400/85	1024x768/85	1360x768/60	2048x1080
640x480/60	1280x854	1366x768/60	
640x480/75	1152x864/75	1366x923/50	
640x480/85	1280x768/60	1440x900/60	
800x600/60	1280x960/60	1440x1080/60	
800x600/75	1280x960/85	1600x1024	
800x600/85	1280x1024/60	1600x1200/60	
1024x768/60	1280x1024/75	1680x1050/60	

RMT-8HDS-IR INSTALLATION

1. Remove battery cover from the back of the RMT-8HDS-IR remote.

2. Verify that dip switches 1 & 2 are in the down (OFF) position.

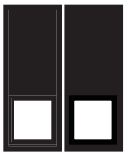
3. Insert the battery, hold the battery so that you can see the positive side facing up. The side that is not marked must be facing down.

4. Test the RMT-8HDS-IR remote by pressing ONLY one button at a time. The indicator light on the remote will flash once each time you press a button. WARNING: Do not press multiple buttons simultaneously and do NOT press buttons rapidly. These actions will cause the remote to reset and steps 1-4 will have to be repeated.

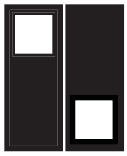
Note: The RMT-8HDS-IR ships with two batteries. One battery is required for operation, the second battery is complimentary.

The following are the dip switch combinations that correspond to the Remote Code menu option on the HD-SDI to DVI Scaler (Please see Menu Functions section for more information):

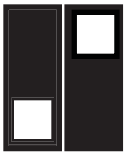
Remote Channel 0:



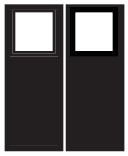
Remote Channel 1:



Remote Channel 2:



Remote Channel 3:



FIRMWARE UPDATE PROCEDURE

Please check http://www.gefen.com/kvm/support/download.jsp for firmware updates and procedures.

SPECIFICATIONS

Input Video Bandwidth.....1.485 Gbps

Output Video Bandwidth.....1.65 Gbps (Single Link DVI-D)

Maximum Input Resolution.....2048x1080p24

Maximum Output Resolution.....1920x1200@60Hz

Audio Output.....2 channel Analog Audio

Power Supply.....5V DC

Shipping Weight.....5 lbs.

Dimensions.....6.5”W x 1”H x 6.75”H

WARRANTY

Gefen warrants the equipment it manufactures to be free from defects in material and workmanship.

If equipment fails because of such defects and Gefen is notified within two (2) years from the date of shipment, Gefen will, at its option, repair or replace the equipment, provided that the equipment has not been subjected to mechanical, electrical, or other abuse or modifications. Equipment that fails under conditions other than those covered will be repaired at the current price of parts and labor in effect at the time of repair. Such repairs are warranted for ninety (90) days from the day of reshipment to the Buyer.

This warranty is in lieu of all other warranties expressed or implied, including without limitation, any implied warranty or merchantability or fitness for any particular purpose, all of which are expressly disclaimed.

1. Proof of sale may be required in order to claim warranty.

2. Customers outside the US are responsible for shipping charges to and from Gefen.

3. Copper cables are limited to a 30 day warranty and cables must be in their original condition.

The information in this manual has been carefully checked and is believed to be accurate. However, Gefen assumes no responsibility for any inaccuracies that may be contained in this manual. In no event will Gefen be liable for direct, indirect, special, incidental, or consequential damages resulting from any defect or omission in this manual, even if advised of the possibility of such damages. The technical information contained herein regarding the features and specifications is subject to change without notice.

For the latest warranty coverage information, please visit Gefen's Warranty web page at http://www.gefen.com/kvm/aboutus/warranty.jsp

PRODUCT REGISTRATION

Please register your product online by visiting Gefen's web site at http://www.gefen.com/kvm/Registry/Registration.jsp

Rev X2

ma-HDSDI-2-dvissl

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